

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number: 10/5/8, 955

Source: PCT

Date Processed by STIC: 1-10-05

ENTERED



PCT

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/518,955

DATE: 01/10/2005

TIME: 15:43:39

Input Set : A:\21033yp.txt

Output Set: N:\CRF4\01102005\J518955.raw

```

4 <110> APPLICANT: Qian, Su
5      Van der Ploeg, Leonardus, H.T.
6      Chen, Howard
7      Weingarth, Drew T.
8      Trumbauer, Myrna
9      Metzger, Joseph M.
11 <120> TITLE OF INVENTION: Agouti-related protein deficient cells,
12      non-human transgenic animals and methods of selecting
13      compounds which regulate energy metabolism
16 <130> FILE REFERENCE: 21033YP
C--> 18 <140> CURRENT APPLICATION NUMBER: US/10/518,955
C--> 18 <141> CURRENT FILING DATE: 2004-12-17
18 <150> PRIOR APPLICATION NUMBER: PCT/US03/20245
19 <151> PRIOR FILING DATE: 2003-06-27
21 <150> PRIOR APPLICATION NUMBER: 60/393,391
22 <151> PRIOR FILING DATE: 2002-07-03
24 <160> NUMBER OF SEQ ID NOS: 14
26 <170> SOFTWARE: FastSEQ for Windows Version 4.0
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 923
30 <212> TYPE: DNA
31 <213> ORGANISM: Mus musculus
33 <400> SEQUENCE: 1
34 agactataca ggaattggga ctttctggga gcatctctct cagcgctggt aggggtaccct 60
35 aaggatgagg agagactaaa tgggggtttt cctgctgagc caggccatgc tgactgcaat 120
36 gttgctgagt tgtgttctgc tgttggcact gcctcccaca ctgggggtcc agatgggcgt 180
37 ggctccactg aagggcatca gaaggcctga ccaggctctg tcccagagt tcccagggtga 240
38 gtatggtcag gttggggata tgtggggcaa cgaccattgc tggccacaga cctgcccgcc 300
39 caggcttaga cctccttccc caatcccaat cccaacctag ggaggtgggt acttggtgca 360
40 tgggtgggtgt ggccctcaca tcttcttgcc ccagggtctaa gtctgaatgg cctcaagaag 420
41 acaactgcag accgagcaga agaagttctg ctgcagaagg cagaagcttt ggcggaggta 480
42 actcattagg gaaagggata aagtagaagg tagggcgcat cagataccat catctctccc 540
43 cacttccgga ttacccaacc tgggcagaac tgcagcccct ccctgacctc agtccactgc 600
44 caccctactg gggtcggggg ttgagagttt cctgaacctt attcccctac gaatgcagggt 660
45 gctagatcca cagaaccgcg agtctcgctt tccgcgtcgc tgtgtaaggc tgcacgagtc 720
46 ctgcttgagg cagcagggtac cttgctgcga cccgtgcgct acgtgctact gccgtttctt 780
47 caatgccttt tgctactgcc gcaagctggg taccgccacg aacctctgta gtcgcacct 840
48 gccaatggat gttgtttggg aaaggcaggg gatgagaata aaggatcggg acggtttaac 900
49 cttaaagctg tggttatttc ttt                                     923
51 <210> SEQ ID NO: 2
52 <211> LENGTH: 131
53 <212> TYPE: PRT
54 <213> ORGANISM: Mus musculus

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56 <400> SEQUENCE: 2

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57 Met Leu Thr Ala-Met Leu Leu Ser Cys Val Leu Leu Leu Ala Leu Pro
58 1 5 10 15
59 Pro Thr Leu Gly Val Gln Met Gly Val Ala Pro Leu Lys Gly Ile Arg
60 20 25 30
61 Arg Pro Asp Gln Ala Leu Phe Pro Glu Phe Pro Gly Leu Ser Leu Asn
62 35 40 45
63 Gly Leu Lys Lys Thr Thr Ala Asp Arg Ala Glu Glu Val Leu Leu Gln
64 50 55 60
65 Lys Ala Glu Ala Leu Ala Glu Val Leu Asp Pro Gln Asn Arg Glu Ser
66 65 70 75 80
67 Arg Ser Pro Arg Arg Cys Val Arg Leu His Glu Ser Cys Leu Gly Gln
68 85 90 95
69 Gln Val Pro Cys Cys Asp Pro Cys Ala Thr Cys Tyr Cys Arg Phe Phe
70 100 105 110
71 Asn Ala Phe Cys Tyr Cys Arg Lys Leu Gly Thr Ala Thr Asn Leu Cys
72 115 120 125
73 Ser Arg Thr
74 130

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77 <210> SEQ ID NO: 3

78 <211> LENGTH: 486

79 <212> TYPE: DNA

80 <213> ORGANISM: Homo sapien

82 <400> SEQUENCE: 3

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83 gccatgctga ccgcagcggg gctgagctgt gccctgctgc tggcactgcc tgccacgcga 60
84 ggagcccaga tgggcttggc ccccatggag ggcacagaa ggcctgacca ggccctgctc 120
85 ccagagctcc caggcctggg cctgcggggc ccactgaaga agacaactgc agaacaggca 180
86 gaagaggatc tggttcagga ggctcaggcc ttggcagagg tactagacct gcaggaccgc 240
87 gagccccgct cctcacgtcg ctgcgtaagg ctgcctgagt cctgcctggg acagcagggtg 300
88 ccttgctgtg acccatgtgc cacgtgctac tgccgcttct tcaatgcctt ctgctactgc 360
89 cgcaagctgg gtactgcat gaatccctgc agccgcacct agctggccaa cgtcagggtc 420
90 ggggctaggg taggggcaag gaaactcgaa taaaggatgg gaccaacaaa aaaaaaaaaa 480
91 aaaaaa 486

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93 <210> SEQ ID NO: 4

94 <211> LENGTH: 132

95 <212> TYPE: PRT

96 <213> ORGANISM: Homo sapien

98 <400> SEQUENCE: 4

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99 Met Leu Thr Ala Val Leu Ser Cys Ala Leu Leu Leu Ala Leu Pro
100 1 5 10 15
101 Ala Thr Arg Gly Ala Gln Met Gly Leu Ala Pro Met Glu Gly Ile Arg
102 20 25 30
103 Arg Pro Asp Gln Ala Leu Leu Pro Glu Leu Pro Gly Leu Gly Leu Arg
104 35 40 45
105 Ala Pro Leu Lys Lys Thr Thr Ala Glu Gln Ala Glu Glu Asp Leu Leu
106 50 55 60
107 Gln Glu Ala Gln Ala Leu Ala Glu Val Leu Asp Leu Gln Asp Arg Glu
108 65 70 75 80
109 Pro Arg Ser Ser Arg Arg Cys Val Arg Leu His Glu Ser Cys Leu Gly

```

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110                               85                               90                               95
111 Gln Gln Val Pro-Cys Cys Asp Pro Cys Ala Thr Cys Tyr Cys Arg-Phe
112                               100                               105                               110
113 Phe Asn Ala Phe Cys Tyr Cys Arg Lys Leu Gly Thr Ala Met Asn Pro
114                               115                               120                               125
115 Cys Ser Arg Thr
116                               130
119 <210> SEQ ID NO: 5
120 <211> LENGTH: 483
121 <212> TYPE: DNA
122 <213> ORGANISM: Mus musculus
124 <400> SEQUENCE: 5
125 atgctaggta acaagcgaat ggggctgtgt ggactgaccc tcgctctatc tctgctcgtg 60
126 tgtttgggca ttctggctga ggggtacccc tccaagccgg acaatccggg cgaggacgcg 120
127 ccagcagagg acatggccag atactactcc gctctgcgac actacatcaa tctcatcacc 180
128 agacagagat atggcaagag atccagccct gagacactga tttcagacct cttaatgaag 240
129 gaaagcacag aaaacgcccc cagaacaagg cttgaagacc cttccatgtg gtgatgggaa 300
130 atgaaacttg ttctcccgac ttttccaagt ttccaccctc atctcatctc atccatcccc 360
131 tgaaaccagt ctgcctgtcc caccaatgca tgccaccact aggctggact ccgccccatt 420
132 tcccttggtt ttgttgtata tatgtgtgtt taaataaagt accatgcatt caaaaaaaaaa 480
133 aaa 483
135 <210> SEQ ID NO: 6
136 <211> LENGTH: 97
137 <212> TYPE: PRT
138 <213> ORGANISM: Mus musculus
140 <400> SEQUENCE: 6
141 Met Leu Gly Asn Lys Arg Met Gly Leu Cys Gly Leu Thr Leu Ala Leu
142 1 5 10 15
143 Ser Leu Leu Val Cys Leu Gly Ile Leu Ala Glu Gly Tyr Pro Ser Lys
144 20 25 30
145 Pro Asp Asn Pro Gly Glu Asp Ala Pro Ala Glu Asp Met Ala Arg Tyr
146 35 40 45
147 Tyr Ser Ala Leu Arg His Tyr Ile Asn Leu Ile Thr Arg Gln Arg Tyr
148 50 55 60
149 Gly Lys Arg Ser Ser Pro Glu Thr Leu Ile Ser Asp Leu Leu Met Lys
150 65 70 75 80
151 Glu Ser Thr Glu Asn Ala Pro Arg Thr Arg Leu Glu Asp Pro Ser Met
152 85 90 95
153 Trp
157 <210> SEQ ID NO: 7
158 <211> LENGTH: 404
159 <212> TYPE: DNA
160 <213> ORGANISM: Homo sapien
162 <400> SEQUENCE: 7
163 atgctaggta acaagcgact ggggctgtcc ggactgaccc tcgccctgtc cctgctcgtg 60
164 tgcctgggtg cgctggccga ggcgtacccc tccaagccgg acaaccggg cgaggacgca 120
165 ccagcggagg acatggccag atactactcg gcgctgcgac actacatcaa cctcatcacc 180
166 aggcagagat atggaaaacg atccagccca gagacactga tttcagacct cttgatgaga 240
167 gaaagcacag aaaatgttcc cagaactcgg cttgaagacc ctgcaatgtg gtgatgggaa 300

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168 atgagacttg ctctctggcc ttttcttatt ttcagcccat atttcatcgt gtaaaacgag 360
169 aatccaccca tctaccaat gcatgcagcc actgtgctga attc 404
171 <210> SEQ ID NO: 8
172 <211> LENGTH: 97
173 <212> TYPE: PRT
174 <213> ORGANISM: Homo sapien
176 <400> SEQUENCE: 8
177 Met Leu Gly Asn Lys Arg Leu Gly Leu Ser Gly Leu Thr Leu Ala Leu
178 1 5 10 15
179 Ser Leu Leu Val Cys Leu Gly Ala Leu Ala Glu Ala Tyr Pro Ser Lys
180 20 25 30
181 Pro Asp Asn Pro Gly Glu Asp Ala Pro Ala Glu Asp Met Ala Arg Tyr
182 35 40 45
183 Tyr Ser Ala Leu Arg His Tyr Ile Asn Leu Ile Thr Arg Gln Arg Tyr
184 50 55 60
185 Gly Lys Arg Ser Ser Pro Glu Thr Leu Ile Ser Asp Leu Leu Met Arg
186 65 70 75 80
187 Glu Ser Thr Glu Asn Val Pro Arg Thr Arg Leu Glu Asp Pro Ala Met
188 85 90 95
189 Trp
193 <210> SEQ ID NO: 9
194 <211> LENGTH: 402
195 <212> TYPE: DNA
196 <213> ORGANISM: Artificial Sequence
198 <220> FEATURE:
199 <223> OTHER INFORMATION: Probe
201 <400> SEQUENCE: 9
202 catgctgacc gcaatgttgc tgagttgtgt tctgctgttg gcaactgcctc ccacactggg 60
203 ggtccagatg ggcgtggctc cactgaaggg catcagaagg cctgaccagg ctctgttccc 120
204 agagttccca ggtctaagtc tgaatggcct caagaagaca actgcagacc gagcagaaga 180
205 agttctgctg cagaaggcag aagctttggc ggaggtgcta gatccacaga accgcgagtc 240
206 tcgttctccg cgctgctgtg taaggctgca cgagtcctgc ttgggacagc aggtaccttg 300
207 ctgcgacccg tgcgctacgt gctactgccg cttcttcaat gccttttgct actgccgcaa 360
208 gctgggtacg gccacgaacc tctgcagccg cacctagcca at 402
210 <210> SEQ ID NO: 10
211 <211> LENGTH: 45
212 <212> TYPE: DNA
213 <213> ORGANISM: Artificial Sequence
215 <220> FEATURE:
216 <223> OTHER INFORMATION: Antisense Oligonucleotides
218 <400> SEQUENCE: 10
219 tgcagcagaa cttcttctgc tcggtctgca gttgtcttct tgagg 45
221 <210> SEQ ID NO: 11
222 <211> LENGTH: 45
223 <212> TYPE: DNA
224 <213> ORGANISM: Artificial Sequence
226 <220> FEATURE:
227 <223> OTHER INFORMATION: Antisense Oligonucleotides
229 <400> SEQUENCE: 11

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230 agcttgccgc agtagcaaaa ggcattgaag aagcggcagt agcac 45
232 <210> SEQ ID NO: 12
233 <211> LENGTH: 23
234 <212> TYPE: DNA
235 <213> ORGANISM: Artificial Sequence
237 <220> FEATURE:
238 <223> OTHER INFORMATION: Primer
240 <400> SEQUENCE: 12
241 aaatcagaag gccacacccc ggt 23
243 <210> SEQ ID NO: 13
244 <211> LENGTH: 25
245 <212> TYPE: DNA
246 <213> ORGANISM: Artificial Sequence
248 <220> FEATURE:
249 <223> OTHER INFORMATION: Primer
251 <400> SEQUENCE: 13
252 aaatcgaccg cgtggtggtg ctaat 25
254 <210> SEQ ID NO: 14
255 <211> LENGTH: 25
256 <212> TYPE: DNA
257 <213> ORGANISM: Artificial Sequence
259 <220> FEATURE:
260 <223> OTHER INFORMATION: Primer
262 <400> SEQUENCE: 14
263 taaagcgcac gctccagact gcctt 25
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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/518,955

DATE: 01/10/2005

TIME: 15:43:40

Input Set : A:\21033yp.txt

Output Set: N:\CRF4\01102005\J518955.raw

L:18 M:270 C: Current Application Number differs, Replaced Current Application No
L:18 M:271 C: Current Filing Date differs, Replaced Current Filing Date